CLAIMS

What is claimed is:

1. A method comprising:

introducing a portion of an interconnect structure in an opening through a dielectric over a contact point; and

introducing a conductive shunt material adjacent the portion of the interconnect structure through a chemically-induced oxidation-reduction reaction.

2. The method of claim 1, wherein introducing the shunt material comprises introducing a shunt material precursor in the presence of a reducing agent.

3. The method of claim 2, wherein the reducing agent comprises an alkaline metal-free material.

4. The method of claim 2, wherein introducing the shunt material precursor comprises introducing the shunt material precursor in the presence of a non-metallic chelating agent.

5. The method of claim 1, further comprising:

introducing the shunt material in an alkaline environment with a pH adjusted by an alkaline metal-free pH adjuster.

6. The method of claim 1, further comprising:

prior to introducing the shunt material, modifying the exposed surface of the interconnect structure.

7. The method of claim 6, wherein modifying the surface of the interconnect structure comprises one of stripping with a stripping agent and doping with a dopant.

8. The method of claim 1, wherein introducing the interconnect structure comprises introducing a barrier material and an interconnect material, and the introduction and reduction of the shunt material precedes the introduction of the interconnect material.

9. The method of claim 8, wherein introducing the interconnect structure further includes introducing a seed material following the introduction of the barrier material.

10. The method of claim 8, wherein the opening through the dielectric material comprises a via having a cross-sectional area and a volume, and a trench to the via having a cross-sectional area greater than the cross-sectional area of the via, and introducing the shunt material comprises introducing the shunt material to substantially fill the volume of the via.

11. The method of claim 2, wherein introducing the shunt material comprises:

placing a substrate comprising the interconnect structure in a bath comprising the shunt material precursor.

12. The method of claim 11, further comprising, prior to placing the substrate in the bath, protecting a portion of the substrate to exposure to the components of the bath.

13. The method of claim 2, wherein introducing the shunt material comprises:

dispensing the shunt material precursor onto the interconnect structure.

14. The method of claim 2, wherein introducing the shunt material comprises:

placing a substrate comprising the interconnect structure in a wafer scrubber; and

while in the wafer scrubber exposing the interconnect structure to the shunt material precursor.

15. A method comprising:

introducing an interconnect structure in an opening through a dielectric over a contact point;

introducing a conductive shunt material having an oxidation number over an exposed surface of the interconnect structure; and

reducing the oxidation number of the shunt material.

16. The method of claim 15, further comprising prior to reducing the oxidation number of the shunt material, introducing a reducing agent.

17. The method of claim 16, wherein the reducing agent comprises an alkaline metal-free material.

18. The method of claim 15, further comprising:

reducing the oxidation number of the shunt material in the presence of a non-metallic chelating agent.

19. The method of claim 15, further comprising:

reducing the oxidation number of the shunt material in an alkaline environment.

20. The method of claim 15, further comprising:

prior to introducing the shunt material, modifying the exposed surface of the interconnect structure.

21. The method of claim 20, wherein modifying the surface of the interconnect comprises one of stripping with a stripping agent and doping with a dopant.

22. The method of claim 15, wherein introducing the interconnect structure comprises introducing a barrier material and an interconnect material, and the introduction and reduction of the shunt material precedes the introduction of the interconnect material.

23. The method of claim 22, wherein introducing the interconnect structure further includes introducing a seed material following the introduction of the barrier material.

24. The method of claim 22, wherein the opening through the dielectric material comprises a via having a cross-sectional area and a volume, and a trench to the via having a cross-sectional area greater than the cross-sectional area of the via, and introducing the shunt material comprises introducing the shunt material to substantially fill the volume of the via.

25. An apparatus comprising:

a substrate comprising a device having contact point;

a dielectric layer overlying the device with an opening to the contact point; and

an interconnect structure disposed in the opening comprising an interconnect material and a different conductive shunt material.

26. The apparatus of claim 25, wherein the shunt material overlies the interconnect material.

27. The apparatus of claim 26, wherein the dielectric layer is a first dielectric layer, and further comprising a second dielectric layer with an opening to the shunt material.

28. The apparatus of claim 25, wherein the interconnect structure comprises a barrier material disposed along side walls of the opening and the shunt material is disposed between the barrier material and the interconnect material.

29. The apparatus of claim 28, wherein the interconnect structure comprises a seed material and the shunt material is disposed between the seed material and the interconnect material.

30. The apparatus of claim 25, wherein the opening through the dielectric material comprises a via having a cross-sectional area and a volume, and a trench to the via having a cross-sectional area greater than the cross-sectional area of the via, and the shunt material substantially fills the volume of the via.

31. The apparatus of claim 30, wherein the interconnect structure comprises a barrier material disposed along side

walls of the opening and the shunt material is disposed between the barrier material and the interconnect material.

32. The apparatus of claim 25, wherein the conductive shunt material comprises one of cobalt and a cobalt alloy.